

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

**PCT**

To:

**ITOH TADAHIKO**

**32ND FLOOR, YEBISU GARDEN  
PLACE TOWER,  
20-3, EBISU 4-CHOME,  
SHIBUYA-KU, TOKYO  
1506032  
JAPAN**

21.07.2004  
**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

(PCT Rule 43bis.1)

Date of mailing  
(day/month/year)

**20. 7. 2004**

Applicant's or agent's file reference

**FOR FURTHER ACTION**

See paragraph 2 below

International application No.  
**PCT/JP2004/005756**

International filing date (day/month/year)

**22.04.2004**

Priority date (day/month/year)

**28.04.2003**

International Patent Classification (IPC) or both national classification and IPC

Int.Cl' **H02M 3/155**

Applicant

**RICOH COMPANY, LTD.**

**1. This opinion contains indications relating to the following items:**

- Box No. I Basis of the opinion
- Box No. II Priority
- Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- Box No. IV Lack of unity of invention
- Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- Box No. VI Certain documents cited
- Box No. VII Certain defects in the international application
- Box No. VIII Certain observations on the international application

**2. FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

**3. For further details, see notes to Form PCT/ISA/220.**

Name and mailing address of the ISA/JP

**Japan Patent Office**

3-4-3, Kasumigaseki, Chiyoda-ku, Tokyo 100-8915, Japan

Authorized officer

**SAKURADA Masaki**

Telephone No. +81-3-3581-1101 Ext. 3356

**3V 2917**

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2004/005756

Box No. I Basis of the opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

This opinion has been established on the basis of a translation from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

- a sequence listing  
 table(s) related to the sequence listing

b. format of material

- in written format  
 in computer readable form

c. time of filing/furnishing

- contained in the international application as filed.  
 filed together with the international application in computer readable form.  
 furnished subsequently to this Authority for the purposes of search.

3.  In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

**PCT/JP2004/ 005756**

<b>Box No. V</b>	<b>Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</b>		
------------------	---	--	--

**1. Statement**

Novelty (N)	Claims	<u>1-14</u>	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	<u>1-14</u>	NO
Industrial applicability (IA)	Claims	<u>1-14</u>	YES
	Claims		NO

**2. Citations and explanations**

<The following document has been considered for the purpose of this report:>

D1 = JP 2000-166223 A(MOTOROLA INC.) 16.06.2000, line 46, column 4 to line 45, column 6, Figs 5-9

D2 = JP 2003-70247 A(FUJI ELECTRIC CO.,LTD.) 07.03.2003, line 27, column 3 to line 21, column 5, Fig 6

D3 = JP 5-275985 A(SANYO ELECTRIC CO.,LTD.) 22.10.1993, line 18, column 2 to line 17, column 3, Fig 5

D4 = JP 2001-86740 A(TOSHIBA CORP.) 30.03.2001, whole document

D5 = US 5914591 A(MATSUSHITA ELECTRIC INDUSTRIAL CO.,LTD.) 22.06.1999, whole document & JP 10-243642 A & JP 10-262365 A & JP 10-262367 A & CN 1195920 A

D6 = EP 1146629 A2(LINEAR TECHNOLOGY CORP.) 17.10.2001, whole document & JP 2001-314076 A & US 6166527 A

The subject matter of claim 1,7,13,14 does not involve an inventive step over D1,D2, D3, for the following reasons.

Technical features the triangle wave generator disclosed in D1 and the triangle wave generator disclosed in D2 respectively, have the same function and are related to similar technical fields. Therefore, the skilled person in the art would easily conceive the idea of employing the feature the triangle wave generator in D2 to substitute the feature the triangle wave generator disclosed in D1.

Technical features the level shift circuit disclosed in D1 and the triangle wave generator disclosed in D3 respectively, have the same function and are related to similar technical fields. Therefore, the skilled person in the art would easily conceive the idea of employing the feature the triangle wave generator in D3 to substitute the feature the level shift circuit disclosed in D1.

Claims 2-6 are dependent on claim 1 and as such also do not meet the requirements with respect to novelty and inventive step.

Claims 8-12 are dependent on claim 7 and as such also do not meet the requirements with respect to novelty and inventive step.